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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,922	06/25/2001	Praveen Gupta	4740-004	9724
24112	7590	02/22/2005	EXAMINER	
COATS & BENNETT, PLLC			MEHRA, INDER P	
P O BOX 5			ART UNIT	PAPER NUMBER
RALEIGH, NC 27602			2666	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/888,922	Applicant(s) GK GUPTA ET AL.	
	Examiner Inder P Mehra	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/25/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,5,15-17,21,22,42-46 and 48 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-14,18-20,23-41 and 47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/902</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to application dated: 6/25/01. Claims 1-48 are pending.

Claim Objections

2. Claims 2, 4, 6-15, 19, 26-41 and 47 are objected to under CFR 1.75 because of the following informalities:

In claim 2 line 2, "data rate capacity" seems to refer to "data rate capacity" in claim 1 line 5. If it is true, it is suggested to change "data rate capacity" to --- the data rate capacity---. Similar problem exists with the terms "an error rate" recited in claim 4 line 1, "usage of the radio channel" recited in claim 6 line 1, "an amount of new data" recited in claim 7 line 2, "data rate capacity" recited in claim 8 line 2, claim 26 line 1, claim 27 line 9, claim 29 line 4, claim 35 line 3, claim 34 line 7, "a maximum usage threshold" recited in claims 10 line 2, and claim 19 line 3, "an initially allocated data rate capacity" in claims 12-13 line 2, "a minimum usage threshold" in claim 15 line 2, usage in claim 34 line 7, claim 36 line 3, and "an initial data rate capacity" in claim 47 line 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-5, 15-17, 39, 41-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a. In claim 4 line 2, the limitation "the communication traffic" has no antecedent basis
 - b. In claim 5 line 9, the limitation "current data rate" has no antecedent basis .
 - c. In claim 15 line 12, the limitation "the current rate value" has no antecedent basis.
 - d. In claim 16 line 6, the limitation "the channel usage" has no antecedent basis.
 - e. In claim 39 line 3, the limitation "the channel ". There is insufficient antecedent basis for this limitation in the claim. This limitation is preceded by "the radio channel" in claim 34 line 3.
 - f. In claim 41 line 2, the limitation "the current data rate capacity" has no antecedent basis.
 - g. In claim 42 lines 7 and 9, the limitation "the data rate capacity". There is insufficient antecedent basis. It is preceded by "an initial data rate capacity in line 4. Similar problem exists in claim 44 line 2, claim 45 lines 3, 5, and 7, and claim 48 line 3.
 - h. In claim 47 line 2, the limitation "the supplemental channel" has no sufficient antecedent basis, because it is preceded by "a supplemental radio channel" in claim 46 line 2. Similar problem exists in claim 48 line 2.
- Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 26-27, 34 and 42 are rejected under 35 U.S.C. 102(e) as being Srinivasan et al (US Patent No. 6,304,549), hereinafter, Srinivasan'549.

For claims 1, 26-27, 34 and 42, Srinivasan'549 discloses, “a method of managing a radio channel assigned to a mobile terminal in a radio access network that supports a plurality of radio channel data rate capacities (refer to “The instant invention is a distributed and dynamic VPC management algorithm, ("DIVA"), and system for managing virtual paths connections (channels) in organized hierarchical networks, refer to col. 4 line 65-col. 5 line 2; and “use in--- - wireless ATM networks where provisioned VPCs between adjacent base stations allows simplified mobile handoffs”, refer to col. 1 lines 50-56, the method comprising:

- monitoring usage of the radio channel over an interval of time (means for monitoring service usage of said virtual path connection (channel) includes monitoring on demand service requests at each said switch for a predetermined window of time, refer to col. 18 lines 27-31);
- increasing a data rate capacity of the radio channel if the usage remains above a maximum usage threshold for a first qualified period of time (increase bandwidth allocation of said switch along said route when said virtual path connection usage at said switch increases above said second predetermined threshold, refer to col. 18 lines 40-45) ; and

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- decreasing the data rate capacity of the radio channel if the usage remains below a minimum usage threshold for a second qualified period of time (decrease bandwidth allocation of said switch when said virtual path connection usage at said switch falls below said first predetermined threshold , refer to col. 18 lines 35-41).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims , 21-22 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Srinivasan et al** (US Patent No. 6,304,549), as applied to claims 1, 27, 34 and 42 above, and further in view of **Chin** (US Patent No. 6,690,938).

For claims 21-22 and 35, Srinivasan'549 discloses all the limitations of subject matter, as above, with the exception of the following limitation, which is disclosed by Chin, as follows:

- “de-allocating the radio channel if the usage is below the minimum usage threshold and a current data rate capacity of the radio channel is at a minimum data rate capacity as defined for the radio access network,**as recited by claim 21 and 35,** (refer to “If the number of remaining traffic channels not currently in use drops below the traffic channel threshold, in-use supplementary channels are de-allocated and reallocated as traffic channels, refer to col. 5 lines 64-67)).

- wherein the radio access network is an IS-2000 based network and the radio channel is a supplemental channel, and further comprising: before initial allocation of the supplemental channel to the mobile terminal, determining whether a fundamental channel that is allocated to the mobile terminal has a sufficient data rate capacity', and allocating the supplemental channel to the mobile terminal if the data rate capacity of the fundamental channel is not sufficient, **as recited by claim 22**, (refer to “If available traffic resources drop below the threshold, control is passed to a resource allocation step 96, where a request is initiated from the target BTS CRM 44 to the BSC SBS 54 requesting”, that the BSC SBS 54 issue a supplemental channel release request to the target, col. 12 lines 5-10.

Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to “If the number of remaining traffic channels not currently in use drops below the traffic channel threshold, in-use supplementary channels are de-allocated and reallocated as traffic channels”, as taught by Chin. This capability can be implemented by incorporating S/W to de-allocate channels, as taught by Chin into Srinivasan’s switch. The motivation to do so being that it provides an efficient method for allocating and de-allocating traffic channels and supplementary channels.

Allowable Subject Matter

9. Claims 2-4,6-14, 18-20, 23-41, and 47, objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. Claims 4-5, 15-17, 39 and 41-48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaks et al (US Patent No. 5,870,666) discloses a radio channel estimation method including BER estimation and RSSI estimation.

Comments

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra

Inder P Mehra

Examiner

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2/14/05

DANG TON
PRIMARY EXAMINER